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Report by the Superintendent of Agriculture for 1931-32.

OFFICE OF AGRICULTURE—MALTA,
Valletta, 4th August, 1932.

Sir,

I have the honour to submit the following report on the Agriculture in the Maltese Islands during the agricultural year commencing 1st September 1931, and on the working of the Department of Agriculture during the financial year 1931-32.

"A". AGRICULTURE.

Meteorological Year.

2. Slight showers of rain to a total of about one inch fell during the first two weeks of September, but the first useful rains fell on the 1st, 2nd and 3rd October, on which days the rainfall amounted to about five inches. The rain was accompanied by a strong N.E. wind which caused some damage to fruit-trees and ornamental trees in both Islands. The rainfall was sufficient to soak the soil to a sufficient depth and to start germination, and the period of incidence was perfectly normal, so that the cycle of vegetation could not be said to have started either early or late. A rather long spell of dry weather followed, but rain again fell abundantly towards the close of October, and the weather continued more or less wet up to the end of the year. On the 3rd, 4th and 5th December there was a N.E. storm which seriously damaged the growing crop of winter potatoes, and was followed immediately by a widespread outbreak of blight which in a short time killed off the plants. However, in most districts the tubers had time to reach practically full development, although a proportion of the tubers became infected with the disease, and when lifted and stored rotted off in a few days. Heavy showers of rain, accompanied by small hail, fell in the last week of December and in the first week of January, and the cold weather retarded the growth of most crops. There were heavy showers on the 4th and the 6th January, but showery weather continued until the second week of January, greatly interfering with cultivation and retarding the sowing of the early potato-crop. There was a spell of fine weather from the 2nd week of January to the 20th February, on which date stormy and rainy weather again set in, with N.E. & E. winds, and continued up to the 7th March, during which period there was a rainfall of over 4 inches, the total rainfall by that date amounting to 23.07 inches. With the fine weather which followed all crops made good progress. A slight attack of blight appeared on the early spring potatoes, but spraying with Bordeaux mixture was very general, and very little damage was done. On the 25th March there was a sharp frost which caused damages to the growing potato plants in several localities particularly in the central and east districts. The prolonged spell of fine weather was only interrupted with dry northernly and westernly winds, without any rainfall of importance, so that by the middle of April, the soil became rather dry, and all crops, principally wheat, barley, sulla, beans, vetches and also potatoes suffered in consequence for lack of sufficient moisture when most required.

Results of Agricultural Year.

3. On the whole, the results of the agricultural year, although better than those of last year, cannot be described as satisfactory. Wheat, meslin and barley were fairly good, and, but for the scarcity of rain in April, would have been considerably better. The winter crop of potatoes was abundant, but many tubers were heavily infected with blight, with consequent loss to both grower and exporter. The spring crop was fairly good and free from disease, but on unirrigated land the development

The Honourable
The Minister for Agriculture and Fisheries.

of the tubers was poor owing to the dry spring. Beans and forages were fairly good, but suffered also from shortage of rain in the critical period of development. Vegetables, especially the cabbage-tribe, were less abundant than last year, but fetched better prices. The same improvement in prices may be reported in the case of winter and spring potatoes. Fruits also fetched good prices, but the prices of all other agricultural produce, including cumin, remained very weak. On the other hand, there was here and there some abatement on the rent value of land held on short lease, but the cost of farm labour stands practically at the same high level.

Wheat.

4. The area under wheat was estimated at 9524 acres, viz : 8436 acres in Malta and 1088 acres in Gozo. This acreage represents only a slight decrease on last year's total of 9602 acres, due exclusively to incidence of crop rotation. The production is estimated at 37613 quarters, against last year's production of 34641 quarters, thus showing an appreciable rise in yield against a slight decrease in acreage. This year's average yield of 31.59 bushels per acre, therefore, compares quite favourably with last year's average of 29.27 bushels. But for the fact that there was a shortage of rain in April, when most needed for the proper growth of the plant and the formation of the ear, the crop would have been decidedly better. Neither rust nor other diseases or pest were prevalent anywhere, and the cool weather in April partly made up for the shortage of rain and permitted the grain to develop and mature properly. As regards the sorts of wheat grown in these Islands last year's remarks on this matter still hold good, and are likely to continue so for a long time. The two sorts forming the bulk of the crop, are the local red hard wheat which is grown on red soils, and the local yellow hard wheat grown chiefly on clayish or whitish soils. These two sorts of wheat, which have been grown here for centuries are not only fully acclimatized but also very resistant to drought and to fungous diseases, and the yellow wheat in particular compares favourably with the best type of imported hard wheats. The Susa or Medeah wheat, the same as the Trimenia wheat of Sicily, called also Macaroni wheat in America, is also being increasingly cultivated in both Islands, and is the ideal wheat for the manufacture of paste. Other sorts of wheat, such as the Australian Dreadnought, the Black-eared or Morocco Wheat, as well as other sorts of hard wheats and occasionally soft wheats are also grown, rather by way of experiment, as owing to conditions of soil and climate, soft wheats cannot be expected to prove satisfactory. The above mentioned average yield per acre places our little Islands in the front row of wheat producing countries, and it is anticipated that with the introduction and adoption of chemical fertilizers, chiefly of sulphate of ammonia, the yield per acre will be further increased. Our methods of cultivation, although very thorough and efficient are quite primitive, and are therefore so often held up to contempt, but owing to the extreme parcelling out of agricultural land the adoption of more up to date methods and implements is hardly possible. However, if our primitive methods are to be judged by the results obtained, our farmers have every reason to be proud of their exertions.

Barley and Meslin.

5. Barley and meslin were grown on an area of 6116 acres, and includes 3498 acres of barley and 2618 acres of meslin, a mixture of wheat and barley. With the exception of 10 acres grown in Malta (West district), all the meslin is grown in Gozo. The drop of 646 acres, as compared with last year's acreage, is due to ordinary vicissitudes of crop rotation. The production is estimated at 19313 quarters of barley and 13027 quarters of meslin, as against last year's yield of 18881 quarters of barley and 15370 quarters of "meslin" or "mischiato". This mixture of wheat and barley was formerly used for human food by the poorer classes in Gozo, but is now almost exclusively used for fattening pigs and rearing poultry and other animals. The accepted standard of meslin for human food was formerly 2 parts of wheat (by volume) to 1 part of barley, but since its use has been relegated for feeding animals, the standard is no longer strictly adhered to; and now consists more often of equal parts of wheat and barley, and even as much as 2 parts of barley to 1 part of wheat.

Other cereals.

6. Barley grown for use as green fodder (*ferrana*) is accounted for under forages. Maize was grown on an area of only 381 acres, which include 303 acres in Gozo, and the production is estimated at 1496 quarters. The preceding year's figures were respectively 262 acres and 1080 quarters. The springs of 1930 and 1931 were dry, and so also was the spring of the current year (1932), so that it is not expected that there will be any marked improvement in the area under maize. In fact it is only in wet springs that the soil is usually in good condition for a catch crop of maize.

7. The total acreage under cereals for the year under review was therefore 16.021 acres on a total cultivable area of 43026 acres, and the production is estimated at a total of 71449 quarters. The average local wholesale prices of wheat, barley, meslin and maize being respectively £2. 2. 6, £1. 5. 0, £1. 15. 0, £2. 0. 0, per quarter, the total wholesale value of our local production of cereals may be estimated at £129,858. 2. 6.

Broad beans.

8. The area under beans amounted to 1575 acres, as against last year's 1193 acres, and the production is estimated at 5818 quarters as compared with 4764 quarters last year, the comparatively low production being due to shortage of rain in spring. However, bean rust, bean-aphis and broom-rape were far less prevalent than usual. Farmers are now seeing the utility of late sowing as a preventive against broom-rape, but unfortunately where there are no arrangements for irrigation, late sowings are liable to suffer in dry springs. Beans under irrigation are being increasingly grown, chiefly for supplying the market with this delicious vegetable as green-beans, the surplus produce being also allowed to mature for the supply of dry beans.

Winter Potatoes.

9. The winter crop of potatoes, in regard to production, has been satisfactory, particularly the irrigated or partly irrigated crop which covered about 600 acres. The total area under winter potatoes was estimated at 2670 acres with a total production of 9473 tons. Its value at the wholesale average price of £5 per ton is £47,365. It may be noted that owing to the timely incidence of the autumnal rains there has been no delay in the germination of winter potatoes, and their subsequent development was well fostered by occasional rains. However the spell of N.E. winds in the first week of December brought about a widespread outbreak of blight, which soon destroyed the plants, but the tubers were already well formed, so that the actual injury to the crop was not great, although in some places the tubers were also found more or less infected. Spraying with Bordeaux mixture was resorted to on about ¼ of the total area. Of course spraying in rainy weather and on wet soil is more or less difficult, and our farmers were always averse to spraying winter potatoes, but are now rapidly falling with the recommendations of this Department to spray the winter crop, as more liable to disease, even with more insistence than the spring crop. In January the price of winter potatoes went up rapidly to £9 per ton, as a result of heedless purchases both here and abroad, but soon went down to the more reasonable figure of £5 per ton.

Spring and Summer Potatoes.

10. Spring and summer potatoes were grown on an area of 4530 acres, including only 170 acres in Gozo. This is a marked increase on last year's 3934 acres. The imports of seed potatoes amounted to a total of 43,828 bags, viz: 37,222 bags Champion, 4350 bags Northern Invincible, 2250 bags Up-to-date, and 6 bags other sorts. On the whole, the seed potatoes imported were very sound, with the exception of a late consignment of Up-to-date, which was heavily blighted and rotten. However, some admixtures of "seed" was noticeable, especially in regard to Northern Invincible, some admixture of "seed" was noticeable, especially in regard to Northern Invincible, besides the imported "seed", extensive sowings were made with local seed saved from the winter crop of White Hebron or White Elephant, especially in the West and Central Districts. In this connection it is interesting to note that Sharpe's Express, a well known kidney sort much appreciated on the London market is now being grown in the same manner as White Hebron, that is from "seed" grown locally, for both the spring and the winter crop.

11. The production of spring and summer potatoes was decidedly poor. The crop was sound as there was hardly any trace of disease, but the development of the plants was weak from the very start, the germination being adversely influenced by the continuous wet weather and the sodden condition of the soil. There was a tendency to improvement in growth during March, but the shortage of rain towards the close of that month and in April proved as injurious to the potato crop as it did to other crops. The production is estimated at 15723 tons, as against last year's 19535 tons, and the difference is all the more striking when this year's increased acreage is taken into account. Spraying was very largely applied by farmers, as a preventive against blight, using the formula recommended by this Department, and practical demonstrations in spraying were again extensively made in all parts of both Islands. The prices of new potatoes started at £12 per ton, and came down to £10 and £9 by the end of April, but remained at a sufficient high level in May to compensate at least in part for the shortage of the crop. The value of the spring and summer crop at the average wholesale price of £7 per ton is £110,061.

Control of sale of Sulphate of Copper.

12. In order to ensure that only sulphate of copper of good quality be made use of in the preparation of Bordeaux mixture, Regulations were issued (Government Notice No. 81 of the 18th March 1932) prohibiting the sale of sulphate of copper for agricultural purposes unless its purity is at least 98 per cent, and placing the sellers under control through a licence issued by the Superintendent of Agriculture.

Fostering export trade.

13. In order to foster the export trade of patotoes suitably packed for the English market, a Government Notice (No. 106 of the 2nd April 1932) was issued reducing the office fee for inspection and sealing from -/1d. per container to 1s/- per 50 containers or part thereof, provided that the potatoes are packed in boxes or cases not exceeding 1 cwt. gross weight.

Onions.

14. The area under onions amounted to 1219 acres as against last year's 1071 acres, and the production is estimated at 8685 tons, compared with last year's 7736 tons. The seed-beds had not suffered much from the persistent rain in autumn, and therefore there was a good supply of seedlings, and the growth was also quite healthy. However the full development of the bulb was somewhat checked by the shortage of rain in spring and therefore a heavy yield could not be expected. However, the bulbs were of the right commercial size, and fairly good prices were realized. The light yellow round onion of the true Spanish type distributed by this Department is becoming more extensively cultivated, especially in those localities of the West District, where onions of the long-keeping type are chiefly grown. A small proportion of the crop, viz: the large white flat or Tripoli onion is reserved for local consumption and is consumed fresh or soon after maturity. It is an onion of quite superior flavour for the kitchen, but of very poor keeping qualities, and its cultivation has accordingly remained practically restricted to the district between the "Ta Kali" reservoirs and the Notabile road, close to Attard.

Cumin.

15 Cumin was grown on an area of 1224 acres, which is a marked fall on last year's 2247 acres. The production is estimated at 5494 cwts., as compared with last year's 10,880 cwts. The low prices of cumin during the year are responsible for this drop in the acreage. This year's crop of cumin, like that of last year was entirely free from the ravages of insects and from fungous diseases, and notwithstanding the deficiency of rain during the whole period of its growth, the grain was well developed and of good colour and quality.

Cotton.

16. In the spring and summer of 1931 the area under cotton was only 334 acres, mostly in Gozo (274 acres). There was therefore a further drop as compared with last year's 499 acres. This reduction is due partly to the low prices of cotton, and

partly also to scarcity of rain in spring, which precluded the possibility of growing a dry-farmed crop except on the very best lands, the late rains of spring of 1931 being mostly too late to affect the general conditions of the soil. The increase of area under dry-farmed vegetables during the last few years, to supply the wants of a teeming population, has also meant a reduction in the area under cotton; in fact the cultivation of cotton has become mostly relegated to the dry-farmed lands in Gozo, where the cultivation of vegetables is handicapped by the limited demand, and by the difficulties of transport to the markets in Malta. The production amounted to 80,779 lbs., against the preceding year's yield of 117,250 lbs. No disease was noticeable anywhere, and the cotton-aphis was troublesome only in a few fields in the district of Kercem, Gozo.

Forages.

17. Notwithstanding the continuous rainy weather in autumn and winter, followed by a scarcity of rain in spring, forages were on the whole quite satisfactory. After germination the development of sulla was normal without any check, with very fine growth, slender stems and abundant foliage free from disease, and its harvesting and drying were made in quite favourable conditions. Caterpillar-plant and vetches were also satisfactory and in regard to vetches although the soil was dry enough the cool weather of April contributed to fill the seed-pods with perfectly sound and heavy seeds. White Vetch or Chickling Vetch (Lathyrus Ochrus) either alone or mixed with Pisum elatius, constituted the bulk of the Vetches, but the Common Tare or Vetch (Vicia sativa), Vicia Narbonensis, and Bitter Vetch (Vicia Ervilia) were also largely grown. At Ghain Tuffieha, for the first time in these Islands, a small field was sown as a trial with Vicia onobrychiodes, which is also one of the best forage vetches in Southern Europe.

18. The total area under forages amounted to 12346 acres, an increase on last year of 450 acres. The total estimated production amounted to 800266 "some" or loads of ten bundles, compared with last year's production of 770747 "some". These figures include sulla with an area of 7302 acres and a production of 473068 some: vetches with an area of 2387 acres and a production of 142170 some; caterpillar-plant with an area of 1850 acres and a production of 128710 some and green barley (*ferrana*) with an area of 807 acres and a production of 56318 some. Fortunately the good crop was also associated with fairly good prices, with an upward tendency.

Vegetables.

19. Vegetables were grown on an area of 2223 acres with a total production estimated at 158108 cwts, as against last year's 1890 acres and 133,265 cwts. Contrary to what happened last year, early and main season cauliflowers fetched good prices, and only the late cauliflowers were very cheap owing to a glut of the market caused by a spell of warm south wind in March, which caused the heads of cauliflowers to bolt in a short period. Cabbages were rather cheap throughout the whole season, except as regards the late irrigated crop maturing in April to June. Carrots, beets, lettuces, endives and other salads were cheap throughout the whole season. Peas and beans were fairly abundant and at reasonable prices. Pumpkins, gourds and marrows were abundant and rather cheap. Water-melons and melons were fairly abundant and generally of good quality; the acreage under melons and water-melons being estimated at 383 acres, and the production at 17,876 cwts.

Tomatoes.

20. Tomatoes, mostly grown as a summer catch crop dry-farmed, suffered considerably from the very hot weather in July and first ten days of August, 1931, the half formed or ripening fruit being burned up and rendered useless. However, notwithstanding this set-back, tomatoes were excessively cheap, towards the middle of July and early in August selling as low as 2d. to 3½d. per basket of about 44 lbs. Prices went up rapidly as a consequence of the disastrous heat, but came down again in September and October with the maturing of the autumn irrigated crop, consisting largely of the variety called Giant Pear. The low prices are accounted for by the fact that the manufacture of sauce and of tinned tomatoes this year was reduced to a minimum as a result of the competition of the foreign product. The area under summer and autumn tomatoes (dry-farmed and irrigated) was estimated at 332 acres,

and the production at 28420 cwts. As this crop is partly grown as catch-crop, and partly on irrigated land as a summer and autumn crop, only this last is accounted for under vegetables as regards acreage and production.

Citrus fruits.

21. There has been no alteration in the extent of the area under Citrus. No orange-groves are being planted, and the few Citrus trees which are planted every year in the yards or back gardens of new buildings for household uses do not constitute an addition of any importance. However, existing groves are carefully attended to, and any decayed or dead trees are invariably replaced by new ones. Last year's corp of Citrus fruits was a very poor one, and amounted to only 69765 dozen fruit as compared with that of the preceding year which amounted to 179720 dozen. This failure is due to the fierce gale of the 12th March 1931 which destroyed the blossoms and lowered the vital and productive energies of the trees. This year the trees have not suffered in any way from bad weather, and the flowering period was favoured with good weather condition, so that a fine crop may be anticipated for next autumn. This year's local production was supplemented by the usual importation of Citrus fruits, chiefly from Sicily, to a total calculated at 815025 dozen fruit. It is, therefore, evident that, apart from export considerations, there are still vast opportunities for the expansion of our orange-groves to meet the local demand.

Other fruits—Grapes.

22. The area under other fruit trees is estimated at 2846 acres, representing only a small increase over that of last year. The total production amounted to 169746 cwts. as against last year's production of 162984 cwts. This year's total includes about 100,000 cwts. of grapes. After deducting the quantity of grapes consumed as fresh grapes, it is estimated at 95000 cwts. of grapes, equivalent to 60800 cantars were available for the press. These, at the rate of 1 "barile" and 1 "quartara" or "giarra" per cantar, should have yielded 76,000 barili of wine, or 722,000 Imp. gallons. The crop of grapes was rather poor in the eastern and central districts of Malta, but was satisfactory in the west district and in Gozo. In both Islands the vineyards were mostly sprayed with Bordeaux mixture, and dusted with sulphur, and the incidence of Oidium or mealy mildew and of the downy mildew was very slight.

Progress of reconstitution of vineyards.

23. The reconstitution on American stock of vineyards affected with Phylloxera goes on in full swing and the planting of new vineyards and replanting of old ones is surpassing the rate of destruction. Besides the many thousands of rootlings of American vines raised by the growers themselves for their own use, 159600 rootlings and 2500 graftlings were supplied from the Government Nurseries, that is a quantity sufficient to plant 100 acres of vineyards. The growers in Malta were somewhat slow to commence the reconstitution of their vineyards, but their demands for rootlings are rapidly increasing so that before long the supply of rootlings from the Malta Nurseries will have to be reserved for the growers in Malta, instead of being forwarded to Gozo to supplement the supply from the Gozo Nurseries. It is fortunate that the vine-nursery at Victoria (Gozo) has been lately extended to permit a large increase over the present output. In Malta an important new vine-nursery has been established on the Government land "ta Sammat" near the Addolorata Cemetery, in lieu of the existing nursery at Tarxien which will be parcelled out as building sites as soon as the "ta Sammat" Nursery is in a condition to furnish the required quantity of cuttings and rooting of American vines. The occasion will be availed of to establish also in the new vine-nursery, a small nursery of Citrus fruits to meet the frequent demands of growers in the east district.

Unsatisfactory state of wine-industry.

24. If it is satisfactory to be able to state that the reconstitution of vineyards on American stock is proceeding with much interest and with all due care on the part of the grower, it is all the more a matter for regret that no steps have so far been taken to organize our wine-industry so as to standardize the finished products, viz : the wines in order to enable them to create a market and to keep it in hold. This

standardization must begin in the vineyard, by limiting the cultivation to those sorts of vines which thrive best and produce the best wine for each district. It is also very desirable to introduce a much needed reform among the wine-makers limiting their numbers to those who have the necessary knowledge and equipment, and doing away with a number of small manufacturers whose haphazard methods and very primitive implements are a serious obstacle in the way of real progress in our wine-industry.

25. The estimated acreage of the various crops in 1931-32, is given in Appendix "A", and the estimated production is shown in Appendix "B". The prices of agricultural produce during the year are given in Appendix "C", and its wholesale value to the grower, calculated on the average market prices, which is estimated at a total of £ 669,081. 5. 4½ is given in Appendix "D". The returns of livestock on the 31st December, 1931, as compared with those of the preceding year are given in Appendix "E".

26. There have been no returns of the number of holdings which have remained at the same figure (11100) as in preceding years with the same average of 3.91 acres of cultivated land for each holding.

Remarks on backward state of Animal Industry.

27. The returns of livestock as shown in Appendix "E" afford some evidence that our animal husbandry is making no appreciable progress. The proposed establishment of an animal husbandry branch attached to the Department of Agriculture and based on the Experimental Farm, is still a crying necessity. It is advisable to commence tentatively on a small scale, for the first two or three years, in order to avoid failures, as notwithstanding the expert advice obtained on the matter, owing to our peculiar circumstances any step taken in this matter is necessarily a matter of experiment. From various points of view an improvement in our present fresh milk supply has been urgently felt for a long time, and an improvement in the supply of local milk products is also necessary, if for no other reason for the financial one of keeping here some of the money which is draining off in purchases abroad. This is largely a matter of organization, assisted by a few well-considered bye-laws. Concomitantly, the improvement in the existing breeds of milk-cows, pigs and poultry and the provision of an up-to-date equipment to deal with them and their produce should also be taken in hand by the establishment of suitable breeding sheds and pens at the Experimental Farm, whence the improved breeds would find their way to all parts of both Islands.

"B". WORKING OF THE DEPARTMENT.

Experimental Farm.

Installation of irrigating plant.

28 During the past year the Experimental Farm has been provided with two small pumping engines to raise water from the existing wells and an adequate supply of water is now available for irrigation, but owing to want of funds the reclamation of waste and rocky land on the eastern side of the farm had to be suspended. However, there is at present enough cultivable land to proceed with the more pressing trials.

Winter potatoes.

29. The early winter potatoes were sown under irrigation on the 20th August. The area sown consisted of about 4½ acres and consisted chiefly of the variety Champion, the "seed" being reserved from the spring crop. Until the commencement of the autumnal rains these potatoes were watered four times, and after germination they were sprayed three times with Bordeaux mixture at fifteen days intervals. The production of the Champion variety amounted to 150¼ cantars of ware potatoes and to about 40 cantars of undersized tubers. Owing to careful spraying the foliage was practically uninjured by blight, and only a very small proportion of the tubers were found diseased, notwithstanding that many fields in the near neighbourhood were heavily infected.

Trials with new sorts of winter potatoes.

30. Besides the "Champion", the same varieties of potatoes presented by Mr. A. Calascione, and grown for the spring crop, as fully detailed in last year's Annual Report, were again tried for the winter crop, making use of "seed" reserved from the spring crop. They were subjected to the same treatment under irrigation as other winter potatoes, and the results were as remarkable as for the spring crop. *Healthy Champion*, *Henry's Selected*, and *Healthy Champion Clark's Selected* were easily first, both for abundance of the tubers and their large size. It is to hoped that either of these two sorts, or both of them, be henceforth cultivated on a large scale to replace the existing type of degenerated Champion which is still largely imported for "seed". *Arran Banner* has also proved a wonderful cropper, but the tubers although very shapely are often of uneven size, and the flesh is white, which is a serious drawback for continental markets where yellow-fleshed potatoes are always preferred for the table. *Dunaverney* and *Farmer* were also heavy croppers, but not so desirable as the two first named. *Mr. Clark's Seedling No. 14*, and especially *Healthy Alpha*, were again disapponting as regards production, and present no claim for recommendation. Another sort of potato under trial for the winter crop was *Nachbow I*, a German round yellow-fleshed potato imported last year under that name, but the results obtained were too poor to afford scope for further consideration.

Spring Potatoes.

31. Spring potatoes were sown during the 2nd and 3rd week of January, an area of about 2.⅓ acres being sown with Up-to-date, and an equal area with Champion. The germination, as in the case of all other spring potatoes this spring, was weak, but the plants improved after some time. On the 25th March a sharp frost injured a few patches in two of the fields, but the plants recovered and made new growth in about ten days. All spring potatoes were sprayed thrice with Bordeaux mixture as a preventive against blight, and there was no sign of this disease either on the foliage or on the tubers, and they were also watered three times and partly four times. The production, considering the unfavourable circumstances of the weather, was satisfactory and amounted to a total of 142 cantars (222 cwts.).

Trials with new sorts of spring potatoes.

32. Six bags of seed potatoes, of 1 cwt. each were presented for trial by Messrs. A. Calascione & Sons, and were sown on the 13th January 1932. They were sown on soil similarly prepared as for the other sorts, and were subjected to the same treatment as regards cultivation, spraying and irrigation. The sorts, and the results obtained, were as hereunder detailed :—

1. Erskine's Champion; production 2 cantars and 36 rotoli, including seed.
2. Steel's Squat Champion; production 3 cantars and 42 rotoli, including seed.
3. Henry's Selected Champion; production 2 cantars and 89 rotoli.
4. Erskine's Dunaverney; production 1 cantar and 94 rotoli.
5. Arran Banner; production 1 cantar and 73 rotoli.
6. Clarke's Selected Champion; production 3 cantars and 81 rotoli.

These results give the first place to Clarke's Selected Champion and the second place to Steele's Squat Champion. Henry's Selected Champion, though next in point of production, were almost equal to the first two as regards weight of "ware" tubers.

33. A bag of seed-potatoes of Dutch origin of the sort known as *Triumph* was presented by Messrs. O. F. Gollcher & Sons, on behalf of Messrs. The Twentsche Overseas Trading Company of Enschede, Holland. This bag containing 1 cwt. of seed potatoes was received somewhat late, viz: on the 2nd March and was sown the next day. The variety *Triumph* was grown also some years ago as an experiment, and has given good results. It has a sturdy vegetation, with deep green foliage with a good production of fair sized round tubers, rather smooth and shallow-eyed, and very yellow flesh. In former trials it has proved a satisfactory sort to grow, for both the spring and the winter crop. On this occasion the production of 1 cwt. seed produced 6 cantars of tubers (9.⅓ cwts.) notwithstanding the fact that the seed was sown so late in the season. This plot of potatoes was subjected to a trial with sulphate of ammonia, (⅓ cwt.) as a fertilizing agent and in addition to ordinary manuring with farmyard manure, which explains at the least partly, the good results obtained.

The Spanish and other onions.

34. The straw-coloured Spanish onion was tried again with the same good results as reported last year. A further importation of seed was made and distributed to growers, and it is satisfactory to report that this valuable variety has not met with favourable reception on the part of the growers, especially in the west district, where the late keeping onions are principally grown. This Spanish onion is now largely grown not only in Spain, its native home, but also in many countries bordering the Mediterranean. The Standard onion which has been grown at the Farm for several years in succession, was grown again this year. It has shown no signs of degeneration and has proved a very fine and productive main crop onion. The Hungarian long-shaped yellowish-brown onion, and the so-called Deiruth onion were again grown this year, with fairly good results. They are pickling onions, but whatever their merits in other countries, they have not proved superior in any way to other pickling onion which are often grown here.

35. The long-keeping Valencia Export Onion, as improved by Veyrat, and the copper-red long-keeping onion of Parma or San Lorenzo were also tried on a small scale. Both are good long-keeping sorts of fine appearance, deserving of cultivation particularly the first named which is an improvement of the straw-coloured Spanish onion, with a more rounded shape, but having the same long-keeping and cooking qualities.

New types of wheat.

36. The following Italian wheats were grown again this year on a small scale, viz: Grano di Rieti selezionato, Rossa Val d'Alona, Fucense tenero, Gentile rosso and Cologna selezionato, this being the third generation in Malta. Notwithstanding the unfavourably dry spring, and the warm weather, they have shown so far hardly any sign of degeneration. Manitoba wheat (Red Fife 1st Grade) was also grown for the 5th generation, and again with good results, thus showing that these wheats can be satisfactorily acclimatized in these Islands, and can be grown without the necessity of recurrent importation of seed corn.

Other types of wheat.

37. The hard wheat Amber durum which has been grown at the Farm for the last six years, and has invariably given a good account of itself on all sorts of soils, was grown again this year on some shallow land, and has not failed to give satisfaction. The same may be said of the Susa or Medeah Wheat (known as Macaroni Wheat in America), a most beautiful grain which does very well in these Islands and is the ideal wheat for the manufacture of paste. Both these sorts, and particularly the Susa wheat, should be sown late, not earlier than January, and will give good results even if sown in February, being in reality spring wheats.

38. The Australian Dreadnought hard wheat, which has been grown for several years always with very good results as regards production and quality, was grown again on a small plot this year. This wheat is now being grown in many parts of the Island. It is a hard wheat of great resistance to drought and rust and of high production. The grain is very plump and heavy and of a dark yellow. At the Agricultural Show at Boschetto it has invariably carried off all first prizes during the last six or seven years often rising to 67 or 68 lbs. to the bushel. Unfortunately being a hard wheat it is not suitable for bread-making, and the paste made from it is rather brownish in colour, although in point of flavour and richness in gluten it leaves nothing to be desired. Another Australian wheat tried again this year at the Farm was the West Australian Standard White Hard Wheat. This is a bread-making wheat of the semi-hard type, and is very well spoken of in Australia. However, its second generation in Malta has shown a marked tendency to shrinkage of the grain, thus losing much of its valuable qualities, and returning partly to the original "hard type" of which it is evidently a derivative.

Long-stapled upland cotton.

39. An area of about $\frac{1}{4}$ acre was sown with long-stapled Upland Cotton, under irrigation early in May 1931, and was watered six times throughout the season. The plants made very fine growth, reaching a height of $2\frac{1}{2}$ ft. on an average, developed a good branch system, and produced a very good crop of bolls, which were harvested in

September and October. The quantity of lint obtained amounted to 2 cantars which is about three times the average quantity usually obtained from an equal area without irrigation. Notwithstanding the present low prices the cultivation of cotton on irrigated land, with such increase of production, is certainly convenient and remunerative to the grower, who in consequence of the oft recurrent gluts of vegetables and other produce grown on irrigated land is often in a quandry as to what crop he should raise for a satisfactorry return. The type of cotton grown, viz: long-stapled Upland, has proved very satisfactory in regard to both quality and production, and the evident advantages of the long-staple of fibre will tell as a further consideration when dealing with the question of low prices.

Vegetables.

40. During the past year some very good crops of vegetables were grown in the Experimental Farm. Four large plots of Globe Artichokes to a total of about 5 acres, yielded over 1800 bundles of 24 artichokes each, from the 15th December, 1931, to the 10th May, 1932, and fetched over £63. There were also excellent crops of late cabbage Quintal of Strasburg and Schweinfurt. Other sorts such as Large Oxheart, Glory of Enklinzen, Savoy of Vesuvius, S. of Pompei, S. Victoria, S. of Asti, S. of Ulm and the Red Cabbage Zenith. Cauliflowers, both early and late, and the black violet broccoli of Sicily were also very satisfactory. The same sorts of Tomatoes tried last year were again grown this year, with the same good results. Large quantities of seedlings of various sorts of Aubergines and Sweet Capsicums were also raised under glass for early planting, and the surplus above what was planted at the Farm, was distributed to growers who applied for them.

Broad beans.

41. A plot of about ½ acre was sown with long-podded Broad Beans for cultivation and disposal as a vegetable. The sowing was made late, that is in the first week of December, with the object of preventing the attacks of broom-rape (Orobanche speciosa) and as expected, this deadly parasite was hardly noticeable at all. Slight attacks of bean-aphis (Aphis rumicis) were soon dispelled by spraying with insecticide and the yield in green pods for the vegetable market was quite satisfactory. Another plot of about the same extent, was sown with very late beans of the same variety. The sowing was made in the first week of January, beans sown so late being locally known as "Ful tal Hamiem", that is *Beans of the Epiphany.* Such sowings are frequent in Gozo, and being so late are of course entirely free from attacks of broom-rape. On the other hand, they must be watered twice or thrice to set their pods, bring them to maturity, and they usually compensate the extra attention in watering, by a bountiful crop, which appearing on the vegetable-market, when the main crop is nearly exhausted, is sure to fetch a good price. To the French Beans grown last year, the dwarf variety Metis was added, and this sort has proved very satisfactory not only in regard to quality, remaining practically stringless almost up to the complete formation of the bean, but also as to productivity which is very abundant and prolonged. The beans are long, curved, white, with large purplish-black blotch at the hilum.

Stud Farm.

42. The Stud Farm consists now of six jacks (adult and young) and six jennies (adult and young). Five animals, viz: 3 jacks and 2 jennies, were sold out during the year, being considered not up to the required standard.

43. A properly arranged and labelled collection of cereals, vegetables, etc. grown at the Experimental Farm was exhibited at the Annual Agricultural Show of Boschetto on the 28th-29th June, 1931, and another collection was shown at the Horticultural Spring Show at San Antonio Gardens on the 7th-8th May, 1932.

EXPENDITURE.

44. The expenditure for the financial year 1931-32 amounts to £16,707. 14. 0 as hereunder detailed :—

A. Personal Emoluments

Annual Expenditure :

Office	£1,678	11	10
Experimental Farms	389	10	0
Gardens & Plantations...	5,438	12	2
Plant Pathology	545	0	0
Viticulture	503	4	2
			£8,554 18 2

B. Other Charges

Annual Expenditure :

Office	£1,378	14	8 *	
Experimental Farms	1,029	17	4	
Gardens & Plantations...	3,696	7	11	
Plant Pathology	458	0	8	
Viticulture	439	19	11	
				£7,003 0 6
Extraordinary Expenditure				1,149 15 4
Total				£16,707 14 0

The expenditure in the preceding financial year amounted to £14,703. 8. 7.

REVENUE.

45 The amount of Revenue collected during the year was £1,811. 2. 3 as against £1,878. 17. 3¾ in 1930-31.

I have, etc.

J. Bonn,
Superintendent of Agriculture.

* Including £592. 7. 7 subsidies to the "Società Economico Agraria", Board of Agriculture for Gozo, Malta Horticultural Society, Malta Horse Show and for the encouragement of modern bee-keeping, and £44 as part contribution to the Imperial Bureau of Entomology, and £20 contribution to the Imperial Agricultural Bureau.

Appendix A.

Area of the various crops 1931-32.

	Locality	Nature of the crop and number of acres of land in each crop.													
		Wheat	Barley	Beans	Potatoes	Onions	Cumin	Citrus fruits	Other fruits	Vegetables	Cotton	Forages	Pasture	Total No. of acres in crop	No. of acres of uncultivated land
Valletta Dist.	Valletta														
	Floriana														
	Hamrun & Marsa	92	25	4	33	2	10	1	6	8	4	68	2	255	26
	Misida & Pietà	43	10	2	26		9	2	3	3		45	1	141	3
	Sliema	25	6	1	14			1	12	5		28	1	83	2
	St. Julians	67	30	4	27	1	7	2	8	12	-	73	2	225	10
Total Valletta District		224	71	11	100	3	26	6	19	18	4	214	6	702	41
East District	Senglea														
	Cospicua														
	Vittoriosa		2	2	2	-	1		2	1		3		12	3
	Zabbar & Calcara	156	107	107	170	88	42	3	22	180		350	23	1,314	49
	Zeitun	185	180	118	176	90	66	2	15	98	4	372	11	1,317	20
	Marsascirocco	178	140	36	175	26	12		15	5	3	160	14	744	24
	Tarxien & Paula	145	150	36	120	68	28	3	34	44		243	3	874	12
	Luca	152	96	48	124	96	30	4	37	25		280	4	896	24
	Micabiba	110	62	2	90	12	8	2	65	2		83	5	445	18
	Krendi	152	68	6	120	25	17	2	14	3	3	182	20	642	90
	Zurrico & Safi	473	110	16	234	27	14	5	34	12		423	32	1,700	69
	Gudia & Chircop	149	132	42	136	130	18	2	22	20	3	295	18	998	42
	Birzebbugia	240	220	28	238	52	20	1	50	15	3	331	46	1,244	80
	Axiak	117	86	12	134	13	12	1	15	5	1	198	10	610	48
Total East District		2,048	1,713	433	1,719	628	297	25	391	433	20	2,920	189	10,796	479
Central District	Naxaro Central	115	158	11	150	3	58	3	40	32	5	370	20	1,265	400
	Birchircara and Sta. Venera	384	152	41	364	27	31	7	43	36		471	13	1,569	54
	Gargur	214	92	6	77	2	34	1	34	17	1	207	22	708	240
	Musta	130	78	3	72	1	24	10	28	5	2	123	19	455	75
	Lia & Balzan	120	26	9	135	7	10	29	19	13		83		451	5
	Attard	223	65	17	188	32	18	17	18	25	1	265	2	871	24
	Zebbug	348	115	41	235	55	92	12	46	105	8	295	6	1,358	21
	Curmi	330	122	37	183	22	62	10	50	93		324	14	1,247	18
Total Central District		2,164	768	165	1,404	140	329	89	278	327	17	2,138	96	7,924	837
West District	Notabile	135	35	21	40	18	23	1	71	106	3	333	10	1,096	6
	Rabato	915	176	74	185	115	35	6	306	310	3	773	20	2,918	345
	Dingli	240	68	33	40	55	10	2	88	98		218	23	875	210
	Siggiewi	452	90	82	170	163	180	39	96	240	8	565	66	2,151	293
	Imgiar	620	230	22	250	21	123	1	182	48	1	622	98	2,218	172
	Melleha	580	55	136	165	6	33	2	123	228	2	885	43	2,228	220
	St. Paul's Bay	615	52	85	252	12	11	2	86	140	-	589	28	1,870	115
	Naxaro, West	115	70	6	35	3	28	1	37	14	2	152	16	503	350
Total West District		4,060	776	459	1,137	393	413	54	989	1,184	19	4,137	298	1,3859	1,711
Total Malta		8,436	3,328	1,068	4,360	1,164	1065	174	1,677	1,942	60	9,400	589	33,281	3,068
Gozo	Victoria (Gran Fontana)	122	200	28	40	2	26	1	123	15	46	241	6	880	24
	Kercem	40	583	54	7	3	6	1	72	16	36	263	18	909	37
	S. Lorenzo	95	138	30	3	2			24	10	25	216	11	554	27
	Garbo & Ghasri	88	430	68	9	5	-	-	13	18	61	248	16	980	106
	Zebbug	150	346	62	8	3	9	2	102	35	63	548	12	1,340	25
	Xaghra	125	282	45	22	2		5	158	38	1	305	32	1,015	38
	Nadur	76	220	50	8	1		4	334	36		258	45	1,032	56
	Kala	92	186	46	17	2	5		181	28	-	205	8	770	30
	Ghainsielem & Comino	120	288	48	15	6	10	1	68	26	3	322	40	947	76
	Xeuchia	65	75	20	16	6	11		30	1	1	126	15	396	80
	Sannat & Munxiar	115	230	56	25	23	92	--	34	28	38	205	98	944	94
Total, Gozo		1,088	2,788	507	170	55	159	14	1,169	281	274	2,937	331	9,767	593
Grand total		9,524	6,116	1,575	4,530	1,219	1224	188	2,846	2,223	334	12,346	920	43,048	3,661

Appendix B.

Estimates of Agricultural Produce—1931-32.

	Locality	Nature of produce and quantity of each										
		Wheat Quarters	Barley Quarters	Beans Quarters	Potatoes Tons	Onions Tons	Cumin-seed Cwts	Citrus fruits Dozens	Other fruits Cwts.	Vegetables Cwts.	Cotton Lint Lbs.	Forages 'Soma' or load of 10 bundles
Valletta Dist.	Valletta	—	—	—	—	—	—	—	—	—	—	—
	Floriana	—	—	—	—	—	—	—	—	—	—	—
	Hamrun & Marsa ...	340	142	15	116	14	46	360	400	585	1,008	4,484
	Misida & Pietà ...	146	56	8	95	—	40	720	210	220	—	2,870
	Sliema	90	35	3	50	—	—	355	130	360	—	1,794
	St. Julians'	234	160	12	92	7	30	700	502	150	—	4,650
Total Valletta District ...		810	393	38	353	21	116	2,135	1,242	1,318	1,008	13,798
East District	Senglea	—	—	—	—	—	—	—	—	—	—	—
	Cospicua	—	—	—	—	—	—	—	—	—	—	—
	Vittoriosa	—	11	7	7	—	—	—	130	70	—	195
	Zabbar & Calcara ...	610	920	390	595	625	190	1,140	1,730	12,300	—	22,800
	Zeitun	720	980	444	608	632	280	720	918	6,810	1,025	24,200
	Marsascirocco... ...	712	780	58	580	175	52	—	840	355	765	10,510
	Tarxien & Paola ...	590	840	136	430	490	130	1,150	2,050	3,200	—	16,350
	Luca	620	535	180	440	680	132	1,500	2,150	1,800	—	17,970
	Micabiba	450	350	8	320	92	36	750	3,868	145	—	5,335
	Krendi	600	373	23	400	170	76	740	2,790	220	760	11,890
	Zurrico & Safi ...	1,840	2,270	60	820	190	64	1,760	3,310	860	—	27,820
	Gudia & Chircop ...	570	730	156	478	925	220	710	1,895	1,420	780	19,680
	Birzebbugia	950	1,220	104	812	340	80	340	2,614	1,040	750	21,900
	Asciak	480	485	45	472	86	54	370	920	560	1,010	12,790
Total East District ...		8,142	9,494	1,611	5,962	4,405	1,314	9,180	23,215	28,780	5,090	191,440
Central District	Naxaro Central ...	1,660	860	41	520	22	260	1,180	2,470	2,200	1,260	24,235
	Birchircara and Sta. Venera	1,530	840	155	1,170	192	144	2,600	2,760	2,640	—	31,270
	Gargur...	820	495	20	254	12	150	360	2,084	1,230	250	13,490
	Musta	500	208	11	258	7	108	3,800	1,680	360	520	7,910
	Lia & Balzan	475	145	33	485	52	46	11,240	1,270	930	—	5,540
	Attard	880	365	62	660	235	82	6,150	1,080	1,900	260	17,470
	Zebbug...	1,370	635	160	825	400	420	4,340	2,880	7,480	2,040	19,745
	Curmi	1,320	670	140	646	165	285	3,900	3,235	6,600	—	21,330
Total Central District ...		8,555	4,218	622	4,818	1,085	1,495	33,570	17,459	23,340	4,330	140,990
West District	Notabile	1,740	194	80	145	130	104	380	4,000	7,480	765	21,506
	Rabato...	3,340	980	276	650	800	160	2,260	17,210	22,000	770	50,080
	Dingli	928	374	115	135	380	45	720	4,950	6,940	—	13,940
	Siggieui	1,900	505	308	600	1,180	820	14,150	5,580	17,500	1,750	36,450
	Imgiar	2,440	1,210	78	870	140	540	350	10,210	3,320	240	40,080
	Melleha	2,320	305	486	590	45	14	720	7,260	16,250	530	54,700
	St. Paul's Bay ...	2,535	310	325	886	95	50	740	5,060	10,100	—	38,850
	Naxaro, West... ...	613	390	22	124	22	126	370	2,290	985	510	9,020
Total West District ...		15,816	4,268	1,690	4,000	2,792	1,859	19,690	56,560	84,575	4,565	264,680
Total Malta ...		33,323	18,373	3,961	15,133	8,303	4,784	64,575	98,476	138,013	14,993	610,908
Gozo	Victoria (Gran Fontana)	485	1,003	105	138	15	118	380	7,530	3,300	11,500	15,605
	Kercem	150	1,945	195	24	20	25	360	3,470	1,100	8,900	16,670
	S. Lorenzo	360	670	112	11	12	—	—	1,490	660	6,225	13,900
	Garbo & Ghasri ...	356	2,162	250	32	34	—	—	2,740	1,320	13,480	16,240
	Zebbug...	600	1,770	232	28	21	41	740	6,270	2,510	15,000	35,430
	Xaghra...	520	1,435	175	80	15	—	1,860	9,870	2,780	265	19,780
	Nadur	304	1,100	184	30	7	—	1,480	20,260	2,600	—	16,800
	Kala	330	910	170	58	14	22	—	1,1070	2,000	—	13,030
	Ghainsielem & Comino	460	1,440	180	53	44	46	370	4,520	1,800	760	20,630
	Xeuchia	280	420	76	50	40	50	—	1,900	75	256	8,108
	Sannat & Munxiar ...	445	1,112	178	86	160	408	—	2,150	1,950	9,400	13,165
Total, Gozo		4,290	13,967	1,857	590	382	710	5,190	71,270	20,095	65,786	189,358
Grand total... ...		37,613	32,340	5,818	15,723	8,685	5,494	69,765	169,746	158,108	80,779	800,266

Appendix C.

Prices of Agricultural Produce during 1931-32.

	£ s. d.		£ s. d.	
Wheat	2 0 0	to	2 5 0	per quarter.
Barley	1 3 4	„	1 6 8	do.
"Mischiato"	1 15 0	„	— — —	do.
Beans	3 0 0	„	— — —	do.
Peas	3 0 0	„	— — —	do.
Common Vetch	1 11 4	„	1 15 0	do.
Chickling Vetch	1 11 4	„	1 15 0	do.
Bitter Vetch	1 15 0	„	1 16 8	do.
Spring and Summer Potatoes ...	6 15 0	„	9 12 0	per ton.
Winter Potatoes	4 0 0	„	8 0 0	do.
Onions	2 4 10	„	2 11 6	do.
Cumin	0 18 6	„	0 19 3	per cwt.
Citrus fruits	0 0 8	„	0 1 0	per dozen
Grapes	0 8 6½	„	0 12 9½	per cwt.
Figs (fresh)	0 3 3	„	0 5 6	do.
Prickly pears	0 2 9	„	0 5 0	do.
Other fruits	0 7 0	„	0 9 0	do.
Vegetables	0 3 6	„	0 9 0	do.
Cotton	0 0 4½	„	— — —	per lb.
Forages	0 3 6	„	0 4 0	per load of 10 bundles.
Wheat-straw	0 2 9	„	0 3 6	per net.
Barley-straw	0 1 2	„	0 1 4	per load of 10 bundles.
Firewood, thick	0 7 6	„	0 8 0	per pesata of 300 rotoli.
Firewood, in bundles	0 2 6	„	0 3 0	per load of 10 bundles.
Goat's milk	0 1 10	„	0 2 0	per gallon.
Cow's milk	0 3 3	„	— — —	do.
Wine (common)	0 1 8	„	0 2 0	do.
Cheese	0 1 1	„	0 1 2	per lb.
Cheese, fresh	0 0 5	„	0 0 6	do.
Wool	0 1 8½	„	— — —	do.
Beef	0 0 10½	„	0 1 1	do.
Pork	0 0 10	„	0 1 0	do.
Mutton	0 0 9½	„	0 0 10¼	do.
Lamb	0 0 9½	„	0 0 10¼	do.
Eggs	0 0 8	„	0 2 0	per dozen.
Poultry	0 5 0	„	0 6 0	per head
Rabbits	0 1 6	„	0 2 6	do.

Appendix D.

Estimated value of Agricultural Produce grown in these Islands during 1931-32.

			£ s. d.		£ s. d.
Wheat	37,613 qrs.	at	2 2 6	=	79,927 12 6
Meslin or "Mischiato"	13,027 „	„	1 15 0	=	22,797 5 0
Barley	19,313 „	„	1 5 0	=	24,141 5 0
Straw (Wheat and Meslin)	322,100 "nets"	„	0 3 6	=	56,367 10 0
Straw (Barley)	157,500 "some"	„	0 1 3	=	9,843 15 0
Beans	5,818 qrs.	„	3 0 0	=	17,454 0 0
Potatoes (Winter)	9,473 tons	„	5 0 0	=	47,365 0 0
Potatoes (Spring and Summer) ...	15,723 „	„	7 0 0	=	110,061 0 0
Onions	8,685 „	„	2 11 3	=	22,255 6 3
Cumin	5,494 cwts.	„	0 19 3	=	5,287 19 6
Citrus fruits	69,765 dozen	„	0 0 10	=	2,906 17 6
Grapes	100,000 cwts.	„	0 10 10	=	54,166 13 4
Other fruits	66,010 „	„	0 0 8	=	2,200 6 8
Cotton (lint)	80,779 lbs.	„	0 0 4¼	=	1,514 12 1½
Cotton seed	1,422 cwts.	„	0 9 6	=	684 19 0
Vegetables	158,108 „	„	0 6 0	=	47,432 8 0
Forages	800,266 "some"	„	0 3 9	=	150,049 17 6
Maize	1,496 qrs.	„	2 0 0	=	2,992 0 0
Melons and Water melons	17,876 cwts.	„	0 8 0	=	7,150 8 0
Prunings	32,600 "some"	„	0 2 9	=	4,482 10 0
		Total ...		...	£669,081 5 4½

APPENDIX E.

The Police returns of livestock on the 31st. December, 1931, as compared with the returns on the 31st. December, 1930, are given in the subjoined table :—

Livestock	31st. December, 1931			31st. December, 1930		
	Malta	Gozo	Total	Malta	Gozo	Total
Cattle:—						
Maltese breed ...	1,897	571	2,468	1,958	727	2,685
Foreign breeds ...	953	574	1,527	1,186	490	1,676
Ovines:—						
Goats	19,679	7 636	27,315	20.138	8,774	28,912
Sheep	11,219	8,037	19,256	10,468	6,536	17,004
Pigs	3,897	1,354	5,251	3,907	2,685	6,592
Donkeys:—						
Maltese breed ...	112	36	148	109	33	142
Foreign breeds ...	2,664	1,372	4,036	2,794	1,678	4,472
Horses	2,468	347	2,815	2,772	282	3,054
Mules	2,353	546	2.899	2,237	483	2,720

APPENDIX F.

OFFICE OF AGRICULTURE—MALTA,

Valletta, 4th August, 1932.

Sir,

I have the honour to submit the following report on the work done in connection with Plant Pathology during the year 1931-32.

I. IMPORTS SUBJECT TO PHYTOPATHOLOGICAL RESTRICTIONS.

Number of consignments examined.

2. There were 847 consignments of agricultural produce subject to phytopathological restrictions. These included potatoes, onions, garlic, Citrus fruit, fruit trees, ornamental plants, flowering bulbs and vegetable soil.

Imports of Potatoes.

3. Potatoes were imported from the United Kingdom, Belgium, Holland, Italy and Hungary.

4. The potatoes imported from the United Kingdom amounted to 84,363 cwts., and were almost exclusively used for seed purposes. The bulk of these potatoes was the produce of the North of Ireland and consisted of Northern Invincible, Champion and Up-to-date.

5. The potatoes imported from other countries amounted to 47,239 cwts. and were distributed as follows:—

From Belgium	26,093	cwts.
,, Holland	4,077	,,
,, Italy	12,458	,,
,, Hungary	4,611	,,

6. There were a few complaints by the importers of the potatoes imported from the North of Ireland for seed purposes about their percentage of purity, and the bags of some of the consignments showed signs of a considerable amount of blighted tubers. These potatoes are not examined on arrival, if accompanied by the certificates prescribed in the regulations issued under Ordinance XIV of 1930.

The Superintendent of Agriculture,
Valletta.

Imports of Citrus fruit.

7. Citrus fruits were imported from Sicily, Jaffa and Jamaica. The latter consisted entirely of grape fruit.

8. The consignments of Citrus fruit included:—

Oranges	...	566,387 dozens.
Lemons	...	225,567 „
Mandarin oranges ...	...	22,285 „
Grape fruit ...	...	791 „

9. Two consignments of oranges from Jaffa were found to be infested with the Red Scale of California, *Aspidiotus ficus* or *Chrysomphalus aonidum*, a pest which does not yet exist in these Islands, and were consequently ordered immediate re-shipment.

Other imports.

10. Onions were imported from Egypt; garlic, fruit trees, ornamental plants, flowering bulbs and vegetable soil were imported from Italy, Holland, Luxemburg and Tunis. A few parcels from France and North America were refused admission in accordance with Government Notice No. 175 of the 28th July, 1932.

II. EXPORTS SUBJECT TO PHYTOPATHOLOGICAL EXAMINATION BEFORE SHIPMENT.

Number of consignments examined.

11. There were 303 consignments of agricultural produce for export which were subjected to phytopathological examination before shipment or for which certificates of origin were issued by this Department. These consisted of potatoes for the United Kingdom, Germany, Belgium, Austria, Czechoslovakia, Ceylon and Tunis, onions also for Tunis, Cumin seed for Holland and the Argentine Republic, vegetables for Tripoli and a few parcels of live plants for England, France and Italy.

III. INSTRUCTION IMPARTED TO FARMERS AND GROWERS.

Technical instruction to Farmers.

12. During the year 3034 farmers and growers received advice or chemicals free of charge, or practical demonstrations at their own farm, or instruction on the nature and the treatment of diseases of plants by the staff of this Department. These included:—

616 farmers who received advice on the treatment of the cumin seed plant for the powdery mildew.

180 growers who received advice or direct help in the treatment of vines for cryptogamic diseases.

167 growers who received help and chemicals free of charge for the treatment of ornamental and flowering plants, bushes and trees for insect pests.

187 farmers who received instruction and chemicals free of charge for the treatment of seed-beds of the cabbage tribe and other horticultural produce against disease.

418 growers who received free treatment for scale-insects, the woolly aphis and other pests affecting Citrus trees, apple-trees, fig-trees and other fruit trees.

1,646 farmers who received advice, instruction or direct help, such as chemicals free of charge or treatment free of charge, for the spraying of the winter and summer crops of potatoes with Bordeaux Mixture.

IV. OTHER ACTIVITIES OF THE DEPARTMENT.

The figure of 8 moth.

13. The larvae of the Figure of 8 Moth (*Diloba coeruleocephala*) appeared again this season in isolated colonies on the almond trees at C. Lia, C. Attard, C. Balzan, Rabato, Santa Venera and Musta, but the timely application of a spray with Potassium sulphocarbonate put an end to its activities.

Outbreak of Ptosima 9—maculata in Vallone Misida.

14. *Ptosima 9—maculata* showed itself by its ravages on the carob trees in Vallone Misida, many large branches of these trees having dried up with the first hot days of the summer. The necessary injunction to farmers and growers, to cut off these branches and to burn them at once to prevent its further spread, was made without delay.

Activities of the European Fruit Fly.

15. The European Fruit Fly (*Ceratitis capitata*) was very active throughout the whole of the summer. Favoured by ideal climatic conditions it developed its swarms practically unchecked, destroying the small crop of the summer fruits which was already jeopardized by the violent storms experienced last year and by the excessive heat during the summer. Unfortunately the weather held out long enough for the pest to make havoc also of the Citrus crop. There is no known remedy of real value against this insect, and in these islands its development is favoured to an uncommon extent both by the warm rainless summers and by the numerous varieties of fruits which mature one after the other during the year. Treatment with injections of carbon bisulphide into the soil to kill the pupating insect was applied, as was done last year, to the principal orange groves of Malta.

An unsuspected host of the Fruit Fly.

16. I have ascertained after long and careful observation, that the Fruit Fly attacks the flower-buds of the Caper plant, *Capparis spinosa* var. *rupestris*, and developes on these flowers an early summer brood in May. This brood is partly the offspring of the eggs of the preceding year, which remained dormant during the winter months in the oranges left hanging on the trees, and partly by the puparia which hybernate in mouldy oranges. It is a known fact that the fruit of the round varieties of oranges attacked by the Fruit Fly towards the close of autumn often rots on the tree without dropping, and the larvae complete their metamorphosis within the fruit, which though quite dry, becomes an unsuspected hiding place of the pupae. The same thing happens in the case of the fruit of the caper plant which is also severely infested by the Fruit Fly. Thus it is proved that the caper bush, as a host of the Fruit Fly in these Islands, is a matter of great importance, and as this plant is everywhere present on the old fortifications and on all rocky wastes and precipitous cliffs, as well as in valleys and ravines in the central parts of both Islands, the control of the Fruit Fly becomes a very complex if not an altogether impossible problem.

The endoparasite of the Fruit Fly.

17. It is not expected that trials with the special endoparasite of the Fruit Fly, the Chalchid Fly *Syntomosphyrum indicum*, Silv., will meet here with better success than it did in Sicily. Dr. Quayle of the United States Department of Agriculture, who has been on a visit of inspection to our groves during the preceding summer, stated that Prof. Silvestri of the Agragrian Institute of Portici distributed over a quarter of a million specimens of *Syntomosphyrum* in the groves of Sicily, but that the experiment has been a total failure, as this endoparasite, being a purely tropical species, does not stand the low temperatures of winter to the same extent as the Fruit Fly. This information was confirmed later in a letter by Prof. Silvestri himself. This failure in Sicily and similar failures in several states of the Federal Union, do not encourage a hope for better success in our case, but of course the experiment may be tried.

Seed-beds of the cabbage tribe attacked by aphides.

18. Seed-beds of the cabbage tribe suffered very severely from aphides, the white fly (*Aleyrodes brassicae*) and the tiny beetles *Haltica oleracea* and *Phyllotreta nemorum*. More or less these pests appear every year on the seed-beds of the cabbage tribe, but this year they showed unusual vigour and many seedlings were killed by them. In order to reduce the damage caused by these insects, and if possible, to check altogether their further development, the necessary insecticides were distributed among the growers, who were also instructed in their proper use.

Control of the Fig-Scale.

19. With the exception of the Fig-Scale (*Ceroplastes rusci*), scale-insects did not give much trouble last year. *Ceroplastes* attacked the fig-trees very badly and a stunted growth of the trees, as well as undersized fruits were the result. Farmers were advised

to spray their fig-trees with a thick wash of freshly slaked lime during the winter, to check the development of the pest next season.

Control of the armoured scales.

20. Following the policy adopted by this Department during the last four years, to spray trees affected by *chrysomphalus dictyospermi minor* or *Aulacaspis pentagona*, 4043 Citrus trees and 976 other trees were sprayed twice during the summer with Permanganate of Potash. *Aulacaspis* is now very rare in our orchards, but *Chrysomphalus* has proved to be more difficult to deal with.

The Novius ladybird thoroughly naturalized.

21. *Icerya purchasi*, the Fluted Scale Insect, is rapidly on the decline, being naturally held in check by its special parasite, the ladybird *Novius cardinalis*, which has now been thoroughly naturalized. Only 37 reports of outbreaks of the pest were received during the year, and on examination of these outbreaks, the Novius ladybird, without one exception, was found to be already firmly established.

Control of the Woolly Aphis at Mtahleb.

22. The Woolly Aphis (*Shizoneura lanigera*) is now well under control in the apple orchards of Bahria and Mtahleb, but fresh extensions of these plantations have been the cause of the reappearance of small colonies of the insect in various parts of Mtahleb. In order to prevent its re-establishment, 8146 apple trees were treated with 2 $^{o}/_{oo}$ wash of Permanganate of Potash and with injections of carbon bisulphide into the soil.

Treatment of vineyards for mildews.

23. There was an outbreak of the Downy Mildew of the vine (*Plasmopora viticola*) and of the Powdery Mildew (*Oidium Tucheri*) in both Malta and Gozo. Some damage was caused to this crop at Ramla in Gozo and at Rabato and Siggiewi in Malta. Government help was asked for by some growers and, as an encouragement, 119 tummoli of vineyards were sprayed for demonstration purposes, the growers paying only the cost of the chemicals.

Treatment of the winter and summer crops of potatoes for Blight.

24. An early outbreak of Blight (*Phytophthora infestans*) caused severe injury to the winter crop of potatoes at Zebbug, Tarxien, Gudia, Chircop, Safi, Zeitun and Micabiba. The fields attacked had not been sprayed with Bordeaux Mixture as a precautionary measure against the disease, owing mainly to the reluctancy of the farmers to undergo any extra expense for this crop, which generally does not fetch a good price when lifted. The damage caused by the disease was further aggravated by a spell of bad weather with continuous rains and strong winds. By following the usual practice of carrying the propaganda home to the grower, with offers of help when necessary, a number of farmers were induced to spray their winter crop in the affected districts, and 217 tummoli of potato fields were consequently treated twice or three times with Bordeaux Mixture under Government supervision.

25. As was expected, Blight re-appeared very virulent on the spring crop of potatoes. Prompt measures were taken to carry on a vigorous propaganda to persuade reluctant farmers to spray their crop properly and at the right time. The staff was increased by a number of trained labourers, knapsack spraying pumps were offered on loan to willing farmers, and a number of small fields at cross roads and in other prominent positions were sprayed free of charge for demonstration purposes. As a result of this campaign there were scarcely any fields of the spring crop of potatoes which were left unsprayed, while about 2,300 tummoli of potato fields were sprayed under the direct supervision and partly with the help of the staff of this Department.

V. ISSUE OF CERTIFICATES AND INSPECTION WORK.

Phytopathological certificates issued by the Department.

26. The number of phytopathological certificates and certificates of origin issued during the year included:—

674 certificates of release for agricultural produce imported into these Islands.

295 phytopathological certificates for agricultural produce exported from these Islands, and

8 certificates of quality and origin for Cumin seed.

Inspections made during the year.

27. In connection with the issue of these certificates 977 inspections were made by me and the Inspector of Plant Diseases at the Marsa, in the Custom's Warehouses and in private stores, while in connection with the treatment of plants for diseases and pests, 252 inspections were made in farms and in private gardens in both Malta and Gozo.

I have etc.,

P. Borg,

Plant Pathologist.

Appendix G.

Office of Public Gardens,

San Antonio, 4th August, 1932.

Sir,

I have the honour to submit the Annual Report on the Public Gardens, Plantations and Nurseries for the year 1930-31.

SAN ANTONIO PUBLIC GARDEN.

Shrubs etc. added and removed.

2. During the year 170 shrubs and 30 creepers were added, and 3 trees were removed.

Fruit crops and sales.

3. The crop of oranges, lemons, etc., was very poor; the yield being 5,350 dozen, which were sold by contract for £97. 15. 0. Other proceeds from the sale of fruits, plants, flowers and firewood amounted to £50. 19. 4, making a total of £148. 14. 4. The total proceeds last year were £297. 7. 8.

Bulbs.

4. The cultivation of bulbs, especially Darwin and Cottage Tulips, and Dutch Iris, was continued and some newly imported varieties of Tulips were added to the already existing large collection, but both Tulips and Iris were not quite so successful as last year. The cultivation of so many thousands of bulbs is not a good investment in a Public Garden. Bulbs deteriorate from year to year, owing to local conditions of soil and climate, and also because in a Public Garden where they must soon make room for other flowering subjects, the bulbs cannot be left in the ground for the necessary length of time to recuperate after their flowering period is over.

New Plant shelter.

5. Another glaze-roofed shed for ornamental plants, and a latrine for ladies have been erected at the south-end side of the garden.

Visitors.

6. The attendance of the public was good, especially during holiday time. The number of tourists who visited the garden was about 40,000.

The Superintendent of Agriculture.

Inquiries.

7. Many inquiries on horticultural matters were attended to both personally or by correspondence.

Lectures to Apprentices.

8. Thirty lectures on floriculture and arboriculture were delivered by the Superintendent to apprentice gardeners employed in the Public Gardens. Private gardeners, who may wish to avail themselves of this opportunity have also access to these lectures.

BOSCHETTO PUBLIC GARDEN.

Trees added and replaced.

9. During the year under review, 5 pine trees were replaced, and 34 Pecan nut trees were added. The following grafted vines were also added:—

699 Pinot noir grafted on Ber. X Rip. 420A,
960 Mammore „ „ Chas. X Ber. 41B,
100 cherry trees, and 310 American vines were grafted.

Fruit Crops and sales.

10. As in the case of San Antonio Public Garden, the crop of oranges, lemons, etc., in this garden was also very poor; the yield being about 1,350 dozen which were sold by contract for £10. 17. 6. The crop of figs and grapes was also sold by contract for £87. Other proceeds from the sale of fruits, firewood, etc., amounted to £71. 7. 6, making a total of £169. 5. 0. The total sum collected last year was £401. 18. 1.

Water Supply.

11. The work of sinking shafts for increasing the supply of irrigation water, for which provision has been made in the Estimates, is still proceeding with good result. Since water was intercepted by farmers occupying high lands in the neighbourhood, the irrigation of trees in this garden has become entirely dependent on rainfall.

12. As in past years, this garden continues to be the favourite resort of holiday makers, and was visited by crowds of people on Sundays and holidays, and also during other days of the week.

SAN ANTONIO AND VERDALA PRIVATE GARDENS.

Trees, etc., added and replaced.

13. Sixteen shrubs and 4 fruit trees were added during the year, and 6 ornamental trees, 8 shrubs and 20 fruit trees replaced.

OTHER GARDENS.

New trees and shrubs planted.

14. The following trees and shrubs were added during the year in the undermentioned gardens:—

Name of Garden.	Trees.	Shrubs.
Argotti Garden	40	30
Maglio Garden	—	20
Sa Maison Garden	10	48
Rundle Garden	12	—
Calcara Garden	57	36
Upper Barracca Garden ...	7	10
Hastings Garden	—	24
St. Michael's Bastion Garden ...	—	9
Lower Barracca Garden ...	—	4
Blata il Baida Garden ...	—	26
Gzira Garden	—	6
Luca Briffa Garden	—	10
Notabile Esplanade Garden ...	18	80

PUBLIC PLANTATIONS.

Trees added and replaced.

15. 174 trees and 263 shrubs were added during the year, along roads and open spaces in Malta, and 646 trees and 131 shrubs were replaced.

16. The following is a detailed list of the new plantations:—

Locality.	No. of trees.	Kind of trees.
St. Francis Ditch, Floriana	5	Acacia
„ „	6	Eucalyptus
Lia Road, (near cemetery)	30	Pines
Ta Bria, Siggieui Road	30	„
Princess Melita Road	16	Ficus
Tower Road, Sliema	5	Tamarix
Outside Portes des Bombes	5	Ficus
„ „	2	Carobs
Sda Sant'Anna, Floriana	3	Ficus
„ „	2	Oleanders
Musta Road	2	Cercis
Piazza San Giuseppe, Safi	4	Ficus
Migiarro to Bengemma Road	1	„
Piazza Ospedale, Zebbug	4	„
„ „	3	Oleanders
Addolorata Cemetery Roadway ...	40	Pines
Attard New Road	1	Oleander
Notre Dame, Sa Maison Road ...	9	„
„ „ „ ...	2	Pines
„ „ „ ...	2	Cercis
„ „ „ ...	2	Acacia
Piazza Fosse Floriana	200	Lantana shrubs
Notre Dame, Sa Maison Road... ...	5	Coprosma „
„ „ „	13	Myoporum „

PUBLIC NURSERIES, MALTA.

Trees and shrubs supplied.

17. During the year 964 trees and 697 shrubs have been furnished from the public nurseries to meet the requirements of the Public Gardens and Plantations, and 787 ornamental trees, 62 shrubs, 46 citrus trees, and 72 other fruit trees have been supplied to private growers as follows:—

Applicants	Ornamental		Citrus trees	Other Fruit trees.
	Trees	Shrubs		
Military Establishments	317	40	2	—
Air Force do.	74	—	—	—
Naval do.	42	—	—	—
Malta Sports Club, Marsa	173	22	—	—
Government Institutions...	63	—	—	—
Sundry local Growers	118	—	44	72

Sales.

18. The amount collected from the sale of trees, firewood, etc., from the Public Nurseries and Plantations was £112. 2. 3, as against £75. 17. 3½ last year.

VILLA RUNDLE AND PUBLIC PLANTATIONS, GOZO.

Trees, etc., added and replaced.

19. During the year, 23 ornamental trees and 40 shrubs were added to Villa Rundle, and 15 ornamental trees and 18 shrubs were replaced.

20. The number of trees added to the Public Plantations along roads and open spaces was 163, and the number of trees replaced 189.

New Plantations.

21. The following is a detailed list of new plantations in Gozo.

Locality.	No. of trees.	Kind of trees.
Sda. Conservatorio, Victoria... ...	56	Pines
Via Migiarro, Caccia	20	Poplars
do. Kala	40	Mulberries
Sda. Chiesa, Ghasri	14	do.
Ghainsielem Valley	23	do.

Trees and scions of fruit trees supplied.

22. 136 fruit trees have been supplied from "Tal Hleuua" Nursery, Kercem, to private growers on payment, and in response to applicants 486 scions of fruit trees have been distributed, free of charge, as follows:—

Name and Address of Applicants.	No. of Scion.	Kind of fruit.
Francesco Said, il Ganga, Sda. Ramla, Nadur... ...	20	Early Peaches
Michele Said, ta Ganza, Sda. S. Blas, Nadur	20	„
Giuseppe Muscat, tal Bukkac, Sda. S. Blas, Nadur ...	20	„
Giuseppe Pisani, tal Gelian, Sda. Boschetto, Nadur ...	20	„
Vittorio Camilleri, ta Haut, Sda. Ramla, Nadur ...	24	„
Francesco Muscat, tal Ietti, Sda. S. Blas, Nadur ..	20	„
Salv. Vella, ta Liezia, „ „ ...	15	„
Bernardo Borg, ta Namri „ „ ...	15	„
Andrea Borg, „ „ „ ...	15	„
Giuseppe Zerafa, ta Rexca „ „ ...	15	„
Giuseppe Portelli, ta Porcosa „ „ ...	20	„
Francesco Muscat, ta Pelle „ „ ...	20	„
Michele Muscat, il Bukkax „ „ ...	20	„
Michele Grech, tal Cosomon, Sda. Corten, Nadur ...	20	„
Salvatore Grech, „ „ „ ...	20	„
Michele Buttigieg, ta Muleja, Via Nadur, Kala ...	20	„
Giuseppe Zammit, ta Mira, Sda. Caccia, Caccia ...	26	„
Francesco Zammit, tas Sui, Sda. Chiesa, Zebbug ...	30	„
Salvatore Zammit, „ „ „ ...	6	„
Lorenzo Stellini, ta Corun, Sda. Birrix, Kercem ...	2	Apricot
Angelo Bajada, ta Bicri, Sda. Fontana, Victoria ...	10	Plum
Mosè Bajada, ta Bicri, „ „ ...	12	Early Peaches
Michele Tabone, ta Miema, Sda. Ballia, „ ...	10	„
„ „ „ „ ...	6	Plum
„ „ „ „ ...	4	Jap. Plum
„ „ „ „ ...	10	Plum
Giovanni Cassar, ta Borg, Sda. Fontana, Victoria ...	20	Early Peaches
Francesco Attard, l-Ispanjol „ „ ...	20	„
Carmelo Borg, ta Villa, Sda. S. Gregorio, Kercem ...	20	Plum

AMERICAN VINE NURSERIES.

New Vine Nursery.

23. The Government lands at Tarxien used by the Department as an American Vine Nursery being requisitioned for building purposes, a new American Vine Nursery has been established in Government lands known as "Ta Sammat", near the Addolorata Cemetery, Tarxien. The new nursery measuring 21 tummoli is larger than the old Vine Nursery, and therefore more Mother-plants and rootlings can be grown, which will be of great value to meet the ever increasing demand for American vine rootlings.

Mother-plants in the New Vine Nursery.

24. The following American vine rootlings, to be grown as mother-plants and cuttings, have been planted in the new Nursery:—

To be grown as mother-plants:

1,800 rootlings, Ber. X Rip. 420 A.	500 rootlings, Chas. X Ber. 41 B.
2,400 „ Rup. du Lot.	50,000 Cuttings.

American Vines grown as Mother-plants.

25. The American Vine Nurseries at Malta and Gozo, now contain 22,210 vines grown as mother-plants.

26. The number of cuttings planted this season in the American Vine Nurseries at Malta and Gozo was 341,850. A total of 5,000 cuttings have been grafted by the whip and tongue method (bench grafting). 2,500 vines grafted by the same process left from last year's stock, remained in the Nursery.

Rootlings and graftlings sold.

27. The following is a detailed list of the number of rootlings and grafted vines sold to growers at Malta and Gozo:—

Malta,	
Rootlings	54,000
Grafted vines	823
Gozo,	
Rootlings	100,900
Total rootlings and grafted vines	155,723

Sales of American Vines.

28. The amount realized from the sale of American vines totalled £ 158. 15. 1, viz: Malta £ 54. 3. 10 and Gozo £ 104. 11. 3, against a total of £ 182. 8. 11½ collected in 1930-31.

Lessons in Viticulture.

29, During the year, 70 practical lessons in viticulture were given to vine growers by the Instructor in Viticulture for Malta, at Melleha, Imtahleb, Bahria, Dingli, Boschetto, Imgiar, Wardia, Buhana, Musta, Rabato, Ghain Tuffieha, Fauuara, Hemsia and Bengemma.

I have, etc.

JOHN BRIFFA,
Superintendent of Public Gardens
and Plantations.

APPENDIX H.

OFFICE OF AGRICULTURE—MALTA,
Valletta, 4th August, 1932

Sir,

I have the honour to submit the following report on the exportation of potatoes from these Islands for the year 1931-32.

Packages for each importing country.

2. Table I shows the number of containers exported from these Islands. The present compilation of statistics is objectionable inasmuch as the number of containers does not convey the idea of the net weight of potatoes exported. There is practically different packing for each country: potatoes for the Netherlands are exported chiefly in casks, of an average gross weight of 2 cantars (about 3 cwts); potatoes for the United Kingdom and Switzerland are packed in small casks weighing one cantar, while those for Germany are packed in both casks and small casks. Potatoes shipped for Ceylon are packed generally in baskets, weighing 80 rotoli (140 lbs), while potatoes for Tunis are packed in bags weighing 85 rotoli (149 lbs). In future both the weight and the number of containers will be recorded.

Exports of Winter Potatoes.

3. Exports of winter potatoes began on the 12th January, while in the previous season, these exports commenced on the 8th December. The delay was due to a virulent

The Superintendent of Agriculture.

outbreak of potato blight which appeared early in December. As a result of this outbreak, which was notified to buyers abroad, the exportation of winter potatoes was somewhat restricted during the first weeks of the season. This decrease effected mostly exports to Ceylon and the Netherlands. An unusually abundant crop in Algeria, accounts also for a decrease of our exports to Tunis. While exports to Germany and Belgium were practically the same as last year, there were improvements in the trade with Switzerland and the United Kingdom. The increased exports to the latter country are due to the introduction of tariffs on imports from foreign countries. Further improvements in trade organization on our part with the co-operation of all sections of the trade, will probably increase the export trade to this country. Altogether 43,438 containers of winter potatoes were exported. These consisted of 10,194 casks, 9,574 small casks, 19,616 bags, 4,052 baskets and 2 boxes. Licence was refused for the exportation of 1921 containers.

Exports of Spring Potatoes.

4. The exportation of the spring crop of potatoes, owing to persistent fine weather began a month earlier than in the previous season. The production, owing to shortage of rain, was not very satisfactory. The exports to the Netherlands and to the United Kingdom, showed improvements, especially those to the latter country, owing to the reason already stated in the case of the winter potatoes. Increases of exports to Belgium and to Switzerland are also noted. These countries may be able to import Malta potatoes on a larger scale, if local dealers try to get a better foothold of these markets. There has been a total absence of export for Ceylon. This is due to the introduction of tariffs in that country and also to disagreements, regarding transactions between local and Ceylon merchants. The packages of spring potatoes totalled 56,467, the containers consisting of 36,905 casks, 11,488 small casks, 5,353 bags, 2,221 baskets and 512 boxes. Permits for 1707 containers were refused because they were not in accordance with existing regulations.

Exports of diseased tubers.

5. Winter potatoes are necessarily too often soiled by the muddy earth in which they grew, and in years when blight is rife, their inspection as to soundness becomes excessively difficult. This Department has repeatedly brought home to the dealers that in such years it is prudent to allow the tubers to rest for about three weeks before packing for shipment, so that any slight infection of blight may have time to develop, and diseased tubers discarded in packing. Unfortunately this is not always done, and therefore the onus of a thorough inspection is thrown entirely on the inspecting officers of this Department, as, owing to want of space and other considerations, it is not possible to allow the parcels to rest for a sufficient time on the quay before inspection and shipment. Complaints as to the soundness of the tubers are mostly dictated not by actual facts but by fluctuations of the market.

I have, etc.,

ALFRED AZZOPARDI.

TABLE I.—Total Exports of WINTER and SPRING POTATOES.
From December 1930 to June 1932.

Importing Country	Export of Winter Potatoes			Export of Spring Potatoes			Total Exports of Winter and Spring Potatoes	
	Season		Increase and Decrease	1931	1932	Increase and Decrease	Season	
	1930-31	1931-32					1930-31	1931-32
	Containers	Containers	Containers	Containers	Containers	Containers	Containers	Containers
Netherlands ...	22,723	11,506	— 11,217	34,989	39,686	+ 4,697	57,712	51,192
Ceylon	21,546	11,827	— 9,719	7,264	—	— 7,264	28,810	11,827
Tunis	16,452	6,595	— 9,857	—	27	+ 27	16,452	6,622
United Kingdom ...	1,250	7,231	+ 5,981	4,275	10,445	+ 6,170	5,525	17,676
Belgium	816	731	— 85	590	2,230	+ 1,640	1,406	2,961
Switzerland ...	966	1,889	+ 923	—	333	+ 333	966	2,222
Germany	4,762	3,491	— 1,271	4,385	3,758	— 627	9,147	7,249
Austria	66	168	+ 102	—	—	—	66	168
Hungary	463	—	— 463	—	—	—	463	—
Total ...	69,044	43,438	— 25,606	51,503	56,479	+ 4,976	—	—
					Grand Total		120,547	99,917

TABLE II.—Total Export of WINTER POTATOES. From December 1930 to April 1932.

Month	Netherlands			Ceylon			Tunis			United Kingdom			Belgium			Austria			Germany			Switzerland			Hungary		
	Containers			Containers			Containers			Containers			Containers			Containers			Containers			Containers			Containers		
	1930	1931	1932	1930	1931	1932	1930	1931	1932	1930	1931	1932	1930	1931	1932	1930	1931	1932	1930	1931	1932	1930	1931	1932	1930	1931	1932
January ...	—	5,555	1,950	—	4.883	5,538	—	6,992	44	—	—	5,839	—	—	46	—	—	—	—	598	194	—	298	—	—	—	—
February ...	—	3,528	4,227	—	9,756	4,584	—	5,461	1,597	—	1,250	1,172	—	—	60	—	—	—	—	1,532	1,586	—	668	770	—	—	—
March ...	—	7,217	3,027	—	4,380	1,705	—	90	4,326	—	—	220	—	419	435	—	66	168	—	2,212	1,622	—	—	719	—	—	—
April ...	—	4,999	2,302	—	635	—	—	1,654	628	—	—	—	—	397	190	—	—	—	—	64	89	—	—	400	—	—	—
December...	1,424	—	—	1,892	—	—	2,255	—	—	—	—	—	—	—	—	—	—	—	356	—	—	—	—	—	463	—	—
Total ...	1,424	21,299	11,506	1,892	19,654	11,827	2,255	14,197	6,595	—	1,250	7,231	—	816	731	—	66	168	356	4,406	3,491	—	966	1,889	463	—	—

TABLE III.—EXPORT OF SPRING POTATOES 1931-1932.

Month	Netherlands			Ceylon			Tunis			United Kingdom			Belgium			Austria			Germany			Switzerland			Hungary		
	Containers			Containers			Containers			Containers			Containers			Containers			Containers			Containers			Containers		
	1930	1931	1932	1930	1931	1932	1930	1931	1932	1930	1931	1932	1930	1931	1932	1930	1931	1932	1930	1931	1932	1930	1931	1932	1930	1931	1932
April ...	—	—	3,225	—	—	—	—	—	—	—	—	461	—	—	145	—	—	—	—	—	1,000	—	—	83	—	—	—
May ...	—	20,574	27,712	—	—	—	—	—	—	—	4,137	7,444	—	590	2,085	—	—	—	—	3,477	2,758	—	—	250	—	—	—
June ...	—	14,415	9,349	—	6,952	—	—	—	27	—	138	2,540	—	—	—	—	—	—	—	161	—	—	—	—	—	—	—
July ...	—	—	—	—	312	—	—	—	—	—	—	—	—	—	—	—	—	—	—	747	—	—	—	—	—	—	—
Total ...	—	34,989	39,686	—	7,264	—	—	—	27	—	4,275	10,445	—	590	2,230	—	—	—	—	4,385	3,758	—	—	333	—	—	—

NOTE.—The Containers for Netherlands consists chiefly of Casks; those for Ceylon and Tunis consist chiefly of Bags and those for the United Kingdom, Belgium, Austria, Germany, Switzerland and Hungary consist chiefly of small Casks.